

APPENDIX B

PETROLEUM PRODUCTS

Six tables are included in Appendix B covering petroleum product flows and component shipment estimates. Appendix Table B1 presents data from U.S.DOE's Energy Information Administration and identifies the major flows of the nation's 18.3 million barrels of petroleum supplied daily. Appendix Table B2 uses the Table B1 supply figures and identifies barrel (ton) flows and shipment estimates for various petroleum product groups. Table B3 lists the assumptions used to estimate total petroleum product shipments, and it tallies the mode shares for each of the product groups in Table B2. Tables B4, B5, and B6 provide additional background data for component estimates included in Table B2.

In Appendix Table B4, the basic home heating survey data are provided by the Department of Energy, notably the number of households in each category and the number of gallons consumed annually by each household. The average delivery size and, therefore, the annual number of deliveries, were estimated by RSPA based on its understanding of home heating oil (distillate) and propane tank sizes. The data in Tables B5 and B6 were provided by phone from DOE; for table B5, the underlying data were based on American Petroleum Institute (API) survey information.

Appendix Table B1: PETROLEUM PRODUCT FLOW DATA, 1996
(thousands of barrels per day)

		----- Supply -----				----- Disposition -----					
		Field	Refinery		Unacc.	Stock	Crude	Refinery		PRODUCTS	
Line	COMMODITY	Production	Produc.	Imports	Crude ^{-a}	Change ^{-b}	Losses	Inputs	Exports	SUPPLIED ^{-c}	Line
1	CRUDE OIL	6,465	--	7,508	215	(124)	(s)	14,195	110	6	1
2	NGLs AND LRGs	1,830	662	211	--	(21)	--	450	53	2,222	2
3	Pentanes Plus	336	--	45	--	(2)	--	171	2	210	3
4	LPGs	1,494	662	166	--	(19)	--	278	51	2,012	4
5	Ethane/Ethylene	627	29	15	--	(13)	--	0	0	683	5
6	Propane/Propylene	525	520	119	--	(s)	--	0	28	1,136	6
7	N Butane/Butylene	150	103	19	--	(8)	--	143	23	113	7
8	Isobutane/Isobutylene	192	11	13	--	1	--	135	0	80	8
9	OTHER LIQUIDS	230	--	585	--	(s)	--	843	22	(49)	9
10	Oth Hydrocarb/Oxy	279	--	51	--	4	--	313	12	0	10
11	Unfinished Oils	-	--	367	--	4	--	416	0	(53)	11
12	Mogas Blend. Comp.	(48)	--	166	--	(8)	--	117	10	0	12
13	Avgas Blend Comp.	--	--	0	--	(s)	--	(4)	0	4	13
14	FINISHED PETR PROD.	82	15,662	1,175	--	(7)	--	--	796	16,130	14
15	Finished Mogas	82	7,565	336	--	(12)	--	--	104	7,891	15
16	Reformulated	--	2,221	174	--	3	--	--	2	2,390	16
17	Oxygenated	340	114	0	--	(10)	--	--	(s)	463	17
18	Other	(258)	5,230	163	--	(5)	--	--	102	5,038	18
19	Finished Avgas	--	20	(s)	--	(s)	--	--	0	20	19
20	Jet Fuel	--	1,515	111	--	(s)	--	--	48	1,578	20
21	Naptha-Type	--	2	2	--	(1)	--	--	2	3	21
22	Kerosene Type	--	1,513	109	--	1	--	--	46	1,575	22
23	Kerosene	--	62	1	--	(s)	--	--	2	62	23
24	Distillate Fuel Oil	--	3,316	230	--	(10)	--	--	190	3,365	24
25	<= 5% sulfur	--	2,084	112	--	5	--	--	51	2,140	25

Appendix Table B1: PETROLEUM PRODUCT FLOW DATA, 1996
(thousands of barrels per day) – cont –

		----- Supply -----				----- Disposition -----					
		Field	Refinery		Unacc.	Stock	Crude	Refinery		PRODUCTS	
Line	COMMODITY	Production	Produc.	Imports	Crude ^{-a}	Change ^{-b}	Losses	Inputs	Exports	SUPPLIED ^{-c}	Line
26	> 5% sulfur	--	1,232	118	--	(14)	--	--	139	1,225	26
27	Residual Fuel Oil	--	726	248	--	24	--	--	102	848	27
28	Naptha Petro Feed	--	191	55	--	(3)	--	--	0	250	28
29	Oth Oils Pet Feed		200	142	--	(s)	--	--	0	342	29
30	Special Napthas	--	50	9	--	(s)	--	--	21	39	30
31	Lubricants	--	173	11	--	(1)	--	--	34	151	31
32	Waxes	--	26	1	--	(s)	--	--	3	24	32
33	Petroleum Coke	--	664	1	--	1	--	--	285	379	33
34	Asphalt & Road Oil	--	459	27	--	(5)	--	--	7	484	34
35	Still Gas	--	654	0	--	0	--	--	0	654	35
36	Misc Products	--	42	(s)	--	(s)	--	--	(s)	42	36
	TOTAL: Lines 1,2,9, &14	8,607	16,324	9,479	215	(152)	(s)	15,488	981	0	

--a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

--b A negative number indicates a decrease in stocks, and a positive number indicates an increase in stocks.

--c Products supplied = Field Production + Refinery Prod. + Imports + Unaccounted Crude

- Stock Change - Crude Losses - Refin. Inputs - Exports.

s = less than 500 barrels per day

NGL = Natural Gas Liquids

LRG = Liquefied Refinery Gas

LPG = Liquefied Petroleum Gas

Oxy = Oxygenates

SOURCE: EIA National Energy Information Center-- "Table 3. U.S. Daily Average Supply & Disposition of Crude Oil and Petroleum Products, 1996," based on various EIA monthly reports.

Appendix Table B2: PETROLEUM PRODUCT SHIPMENT & TONNAGE ESTIMATES (Page 1 of 4)

		Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12
			Daily Brls (000)	IMPORTS To Refineries	Imports to Reg Storage	Imports to End Users	FIELD To Export	Field to Refinery	Field to Reg Storage	Field to End Users	Barrels Shipped	Daily Shipments	Daily Tons By Truck
		PRODUCT SUPPLIED *		----- Daily Barrels -----				----- Daily Barrels -----					
a	1	CRUDE OIL	6	7,508			110	6,465			6,575	263	
a	2	NGLs and LRGs	2,222										
a	3	Pentanes Plus	210										
a	4	LPGs *	2,012										
a	5	Ethane/Ethylene	683										
a	6	Propane/Propylene	1,136										
a	7	43% Petro Chem Pl Use	488										
a	8	33% Residential/Comm Use	375										
a	9	72% Res Heating Use (del by milk run)	270										
a	10	27% Other	105										
a	11	12% Industrial	136										
a	12	8% farm	91										
a	13	3% internal combustion	34										
a	14	1% other	11										
a	15	N Butane/Butylene	113										
a	16	Isobutane/Isobutylene	80										
a	17	OTHER LIQUIDS	(49)										
a	18	FINISHED PETROLEUM PRODUCTS	16,130			1,175					1,175	6,216	176,241
a	19	Finished Motor Gasoline	7,891							82	82	431	12,299
a	20	Reformulated	2,390										
a	21	Oxygenated	463										
a	22	Other	5,038										
a	23	Finished Motor Gasoline											
a	24	54% by MOC to retail outlets, 9000gal	4,261										
a	25	46% by Jobbers	3,630										
a	26	50% straight to outlets, 9000 gal	1,815										
a	27	25% to JS, 9000 reshipped 9000	907										
a	28	25% to JS, 9000 reshipped 2000	907										
a	29	Finished Avgas	20										
a	30	Jet Fuel	1,578										
a	31	Natptha-Type	3										
a	32	Kerosene-Type	1,575										
a	33	Jet Fuel											
a	34	67% piped to airports	1,057										
a	35	33% trucked to airports	521										
a	36	Kerosene	62										
a	37	Home heating use	22										
a	38	Other	40										
a	39	Distillate Fuel Oil	3,365										
a	40	Low sulfur <= 5% (motor diesel)	2,140										
a	41	High sulfur >= 5% (heating oil)	1,225										

Appendix Table B2: PETROLEUM PRODUCT SHIPMENT & TONNAGE ESTIMATES (Page 2 of 4)

		Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12
			Daily Brls (000)	IMPORTS To Refineries	Imports to Reg Storage	Imports to End Users	FIELD To Export	Field to Refinery	Field to Reg Storage	Field to End Users	Barrels Shipped	Daily Shipments	Daily Tons By Truck
		PRODUCT SUPPLIED *		----- Daily Barrels -----				----- Daily Barrels -----					
a	42	Distillate Fuel Oil											
a	43	Low sulfur <= 5% (motor diesel)	2,140										
a	44	54% by MOC to retail outlets, 9000gal	1,156										
a	45	46% by Jobbers	984										
a	46	50% straight to outlets, 9000 gal	492										
a	47	25% to JS, 9000 reshipped 2000	246										
a	48	25% to JS, 2000 reshipped 2000	246										
a	49	High sulfur >= 5% (heating oil)	1,225										
a	50	Residential Heating	480										
a	51	Trucked RS to JS, del. by milk run	480										
a	52	Other	745										
a	53	50% to JS, 9000 reshipped 9000	373										
a	54	50% to JS, 9000 reshipped 2000	373										
a	55	Residual Fuel Oil	848										
a	56	Coastal Barge (15,000 barrel)	848										
a	57	Other	2,365										
a	58	Naptha Petro Feed (consumed on site)	250										
a	59	Other Oils Petro Feed (on site)	342										
a	60	Special Napthas (on site)	39										
a	61	Lubricants	151										
a	62	Waxes	24										
a	63	Petroleum Coke (assumes all rail)	379										
a	64	Asphalt & Road Oil (to asp plnt & resh)	484										
a	65	Still Gas (on site)	654										
a	66	Misc Products (on site)	42										
a	67												
a	68	TOTAL (Lines 1,2,17,18)	18,309										
a	69	Barrels Shipped		**		1,175	110	6,465		82	7,832		
a	70	Daily Barrels Shipped (000)	7,832										
a	71	Annual Tons Shipped (000)	420,226										
a	72	Daily Tons Shipped (000)	1,151										
a	73	Daily Shipments	6,910									6,910	
a	74	Daily Tons Shipped By Truck											188,541

* Product Supplied is a net figure. Import and Field crude to refineries, Field to Export, etc. are "inputs" to net Products Supplied. See also App. Table B1. Major tonnage movements (barrels) and shipments in Cols 3-9 (10-11) are additional to post-refinery movements, Cols 13-18.

** All Crude Oil Imports are assumed to be "deposited" directly at refineries, and are thereby excluded from tally of barrels shipped and shipments moving within the U.S.

Appendix Table B2: PETROLEUM PRODUCT SHIPMENT & TONNAGE ESTIMATES (Page 3 of 4)

	Col 1	Col 2	Col 13	Col 14	Col 15	Col 16	Col 17	Col 18	Col 19	Col 20	Col 21
		Daily Brls (000)	Refineries To Export	Refineries to End Users	Refineries to Reg Storage	Reg Storage to End Users	Reg Storage to Jobber Storage	Jobber Storage to End Users	Barrels Shipped	Daily Shipments	Daily Tons By Truck
	PRODUCT SUPPLIED		----- Daily Barrels -----			----- Daily Barrels -----					
b 1	CRUDE OIL	6									
b 2	NGLs and LRGs	2,222									
b 3	Pentanes Plus	210		210					210	8	
b 4	LPGs *	2,012									
b 5	Ethane/Ethylene	683		683					683	27	
b 6	Propane/Propylene	1,136									
b 7	43% Petro Chem Pl Use	488		488					488	53	
b 8	33% Residential/Comm Use	375									
b 9	72% Res Heating Use	268			268		268	268	804	51,491	60,297
b 10	27% Other	105			107		107	107	321	4,990	29,153
b 11	12% Industrial	136			136		136	136	408	6,342	37,050
b 12	8% farm	91			91		91	91	273	4,244	24,800
b 13	3% internal combustion	34			34		34	34	102	1,584	9,218
b 14	1% other	11			11		11	11	33	512	2,943
b 15	N Butane/Butylene	113		113					113	16	
b 16	Isobutane/Isobutylene	80		80					80	7	
b 17	OTHER LIQUIDS	(49)									
b 18	FINISHED PETROLEUM PRODUCTS	16,130									
b 19	Finished Motor Gasoline	7,891									
b 20	Reformulated	2,390									
b 21	Oxygenated	463									
b 22	Other	5,038									
b 23	Finished Motor Gasoline										
b 24	54% by MOC to retail outlets, 8000	4,261			4,261	4,261			8,522	22,579	639,118
b 25	46% by Jobbers	3,630									
b 26	50% straight to outlets, 8000 gal	1,815			1,815	1,815			3,630	9,601	272,236
b 27	25% to JS, 8000 reshipped 8000	907			907		907	907	2,721	9,560	272,086
b 28	25% to JS, 8000 reshipped 2000	907			907		907	907	2,721	23,845	272,086
b 29	Finished Avgas	20		20					20	105	3,000
b 30	Jet Fuel	1,578									
b 31	Natptha-Type	3									
b 32	Kerosene-Type	1,575									
b 33	Jet Fuel										
b 34	67% of total piped to airports	1,057		1,057					1,057	42	
b 35	33% some rr; most trucked to	521		521					521	2,689	76,183
b 36	Kerosene	62									
b 37	Home heating use	22			22		22	22	66	578	6,600
b 38	Other	40			40	40			80	1,050	11,999
b 39	Distillate Fuel Oil	3,365									
b 40	Low sulfur <= 5% (motor diesel)	2,140									
b 41	High sulfur >= 5% (heating oil)	1,225									

Appendix Table B2: PETROLEUM PRODUCT SHIPMENT & TONNAGE ESTIMATES (Page 4 of 4)

		Col 1	Col 2	Col 13	Col 14	Col 15	Col 16	Col 17	Col 18	Col 19	Col 20	Col 21
			Daily Brls (000)	Refineries To Export	Refineries to End Users	Refineries to Reg Storage	Reg Storage to End Users	Reg Storage to Jobber Storage	Jobber Storage to End Users	Barrels Shipped	Daily Shipments	Daily Tons By Truck
		PRODUCT SUPPLIED		----- Daily Barrels -----			----- Daily Barrels -----					
b	42	Distillate Fuel Oil										
b	43	Low sulfur <= 5% (motor diesel)	2,140									
b	44	54% by MOC to retail outlets,	1,156			1,156	1,156			2,312	6,143	173,391
b	45	46% by Jobbers	984									
b	46	50% straight to outlets, 8000	492			492	492			984	2,603	73,796
b	47	25% to JS, 8000 reshipped	246			246		246	246	738	2,593	73,796
b	48	25% to JS, 8000 reshipped	246			246		246	246	738	6,467	73,796
b	49	High sulfur >= 5% (heating oil)	1,225									
b	50	Residential Heating	482									
b	51	Trucked RS to JS, del. milk	482			482		482	482	1,446	92,075	144,593
b	52	Other	743									
b	53	50% to JS, 8000 reshipped	372			372		372	372	1,116	3,921	111,594
b	54	50% to JS, 8000 reshipped	372			372		372	372	1,116	9,780	111,594
b	55	Residual Fuel Oil	848									
b	56	Barge (15,000 barrel)	848		848					848	57	
b	57	Other	2,365									
b	58	Naptha Petro Feed (most on site)	250		2					2	3	
b	59	Other Oils Petro Feed (most on site)	342		1					1	2	
b	60	Special Napthas (on site)	39									
b	61	Lubricants	151			151	151			302	32,503	45,298
b	62	Waxes	24			24	24			48		
b	63	Petroleum Coke (assumes all rail)	379		379					379	106	
b	64	Asphalt & Road Oil (to asp plnt &	484			484	484			968	12,684	144,300
b	65	Still Gas (on site)	654									
b	66	Misc Products (on site)	42									
b	67											
b	68	TOTAL (Lines 1,2,17,18)	18,309									
b	69	Barrels Shipped			4,402	12,624	8,423	4,201	4,201	33,851		
b	70	GRAND TOTAL Daily Barrels Shipped	41,683									
b	71	GRAND TOTAL Annual Tons Shipped	2,284,426									
b	72	GRAND TOTAL Daily Tons Shipped (000)	6,259									
b	73	NUMBER OF TIMES Average Ton Moved	2.3									
b	74	GRAND TOTAL DAILY SHIPMENTS									315,170	
b	75	Daily Tons Shipped By Truck										2,857,470

-- a, b Coding used to indicate identical product listing, but different distribution phases, on pages 1-2 and 3-4 of Appendix Table B2.

Appendix Table B3: PETROLEUM PRODUCT ESTIMATES -- LINE ITEM ASSUMPTIONS

LINE	PRODUCT or COMPONENT	DISCUSSION	----- SHIPMENTS BY MODE -----				TOTAL
			Truck	Rail	Pipeline	Water	
a1	Crude Oil	Assumes 6,575,000 barrels moved by pipeline @ 25,000 barrels per shipment.			263		263
a18	Finished Petro Prod	Import figure given. Assumes all moves direct to end users by 8,000 gallon truck.	6,216				6,216
a19	Motor Gasoline	Field figure given. Assumes all moves direct to end users by 8,000 gallon truck.	431				431
b3	Pentanes Plus	Supply figure given. Assumes all moved direct from refinery to end users via pipeline.			8		8
b5	Ethane/Ethylene	Supply figure given. Assumes all moved direct from refinery to end users via pipeline.			27		27
b6	Propane/propylene	Supply figure given. Lines b7-b14 %s in part from API "Propane Class of Trade Study," 1995 data.					
b7	Propane/propylene	Assumes 34 rail carloads and remainder moves direct from refinery to other plants (end users) via pipeline.		34	19		53
b8	Propane: Res/Com	Percent from API Class of Trade Study; components derived from Home Heating Survey.					
b9	Propane Res Heat	Assumes pipeline to RS; assumes 1/2 rail and 1/2 8,000 trk to JS; home deliveries @ 200 gallons/ home heating customer.	51,255	225	11		51,491
		Delivery tallies based on Residential Heating Survey; see Appendix Table B4.					
b10	Propane: R/C Other	Assumes pipeline to RS; assumes 33 rail carloads and rest by 8,000 gallon truck to JS; deliveries @ 1,000 gal avg.	4,952	33	5		4,990
b11	Industrial	Assumes pipeline to RS; assumes 42 rail carloads and rest by 8,000 gallon truck to JS; deliveries @ 1,000 gal avg.	6,295	42	5		6,342
b12	Farm	Assumes pipeline to RS; assumes 28 rail carloads and rest by 8,000 gallon truck to JS; deliveries @ 1,000 gal avg.	4,212	28	4		4,244
b13	Internal Combustion	Assumes pipeline to RS; assumes 11 rail carloads and rest by 8,000 gallon truck to JS; deliveries @ 1,000 gal avg.	1,571	11	2		1,584
b14	Other	Assumes 4 rail carloads and rest by 8,000 gallon truck to JS; deliveries @ 1,000 gal avg.	508	4			512
b15	N Butane/But	Supply figure given. Assumes 12 rail carloads and remainder by pipeline to other refineries/plants or end users.		12	4		16
b16	Isbut/Isbutylene	Supply figure given. Assumes 4 rail carloads and remainder by pipeline to other refineries/plants or end users.		4	3		7
b19	Fin Motor Gasoline	Supply figure given.					
b24	Fin Motor Gasoline	54% figure from US DOT; pipe to RS; RS to retail outlets (end users) in 8,000 gallon trucks.	22,371	39	169		22,579
b25	FMG by Jobbers	46% figure from US DOT.					
b26	by Jobbers	50% est. EIA; pipeline to RS; RS to retail outlets in 8,000 gallon trucks.	9,528		73		9,601
b27	by Jobbers	25% est. EIA; pipeline to RS; RS to JS in 8,000 gal trucks; reshipped in 8,000 gallon trucks.	9,524		36		9,560
b28	by Jobbers	25% est. EIA; pipeline to RS; RS to JS in 8,000 gal trucks; reshipped in 2,000 gallon trucks.	23,809		36		23,845
b29	Finished Avgas	Supply figure given. Assumes all moved from refinery to end users in 8,000 gallon trucks.	105				105
b30-32	Jet Fuel	Supply and component supply figures given.					
b34	Jet Fuel Piped	67% est. from EIA; assumes direct from refineries to airports (end users) via pipeline.			42		42
b35	Jet Fuel Trucked	33% est. from EIA; assumes direct from ref to airports (end users) via 8,000 gal trucks.	2,667	22			2,689
b36	Kerosene	Supply figure given. Components derived from Home Heating Survey. See Appendix Table B4.					
b37	Kerosene Home	Supply figure derived; assumes Ref to RS by 8,000 gal trk; to JS by 2000 gal.	578				578
b38	Kerosene Other	Supply figure derived; assumes Ref to RS by 8,000 gal trk; to end users by 2000 gal trucks.	1,050				1,050

Appendix Table B3: PETROLEUM PRODUCT ESTIMATES -- LINE ITEM ASSUMPTIONS (Continued)

LINE	PRODUCT or COMPONENT	DISCUSSION	----- SHIPMENTS BY MODE -----				TOTAL
			Truck	Rail	Pipeline	Water	
b39-41	Distillate	Supply and low sulphur / high sulphur components given.					
b43	Low Sulphur	Supply figure given. Assumes all is highway motor diesel distributed like gasoline.					
b44	Diesel MOC	54% figure from US DOT; pipe to RS; RS to retail outlets (end users) in 8,000 gal trucks.	6,069	28	46		6,143
b45	Diesel by Job.	46% figure from US DOT.					
b46	by Jobbers	50% est. EIA; pipeline to RS; RS to retail outlets in 8,000 gal trucks.	2,583		20		2,603
b47	by Jobbers	25% est. EIA; pipeline to RS; RS to JS in 8,000 gal trucks; reshipped in 8,000 gal trucks.	2,583		10		2,593
b48	by Jobbers	25% est. EIA; pipeline to RS; RS to JS in 8,000 gal trucks; reshipped in 2,000 gal trucks.	6,457		10		6,467
b49	High Sulphur	Supply figure given.					
b50	Res Heating	Supply figure derived Home Heating Survey.					
b51		Assumes pipeline and 108 rail to RS; 8,000 gal trk to JS; JS to end users (residential users) in 200 gal deliveries.	91,951	108	16		92,075
b52	Other	Supply figure derived as high sulphur remainder; includes commercial, industrial, utilities, and farm users.					
b53	by Jobbers	Assumes pipeline to RS; truck to JS 8,000 gal; reshipped from JS to end users in 8000 gal trucks.	3,906		15		3,921
b54	by Jobbers	Assumes pipeline to RS; truck to JS 8,000 gal; reshipped from JS to end users in 2000 gal trucks.	9,765		15		9,780
b56	Residual Fuel Oil	Supply figure given. Assumes all transported by coastal barge with 15,000 barrel capacity (2,250 tons / shipment).				57	57
b57	Other	Supply figure given.					
b58-60	Naptha, etc.	Assumes 5 rail carloads shipped off site and remainder consumed on site.		5			5
b61	Lubricants	Supply figure given. Assumes truck to RS in 8,000 gal trucks; delivery to end users in average 200 gal lots.	32,503				32,503
b62	Waxes	Supply figure given. Assumes truck to RS in 8,000 gal trucks; hazmat status & final delivery to be identified.					
b63	Petroleum Coke	Supply figure given. Assumes 70 rail carloads and remainder in 1,400 ton river barge from refinery to end users.		70		36	106
b64	Asphalt & Rd Oil	Supply figure given. Assumes 10 rail carloads; remainder in 8,000 gal trks to asphalt plants; 2,000 gal trks to construction sites.	12,674	10			12,684
		DAILY SHIPMENT TOTALS	313,563	675	839	93	315,170
		PERCENT OF TOTAL (market or "mode" share)	99.49%	0.21%	0.27%	0.03%	100%
		DAILY TONS SHIPPED	0	60,750	3,146,250	178,650	3,385,650
		PERCENT OF TOTAL (market or "mode" share)	0%	2%	93%	5%	100%

Appendix Table B4: RESIDENTIAL HEATING SURVEY

<i>Fuel Consumed Housing Characteristic</i>	Households (millions)	Annual Gallons	Delivery Size (a) (gallons)	Annual Deliveries /Household	Total Annual Deliveries	Total Daily Deliveries	Total Daily Barrels
<i>Distillate Home Heating Oil</i>							
Single Family	8.0	753					
Detached	7.4	763	200	3.8	28,231,000	77,345	368,311
Attached	0.6	627	200	3.1	1,881,000	5,153	24,540
Mobile Home: self pick-up	0.3	414	self pick-up				8,102
Mobile Home: w delivery	0.3	414	200	2.1	621,000	1,701	8,102
Multi-family	2.5	495					
2-4 Units (b)	0.9	733	125	5.9	1,759,200	4,820	43,033
5 or More Units ©	1.6	365	150	2.4	146,000	400	38,095
Subtotal, w MHs pick-up	10.8					87,718	482,081
Subtotal, w Mhs receiving						89,420	482,081
<i>LPG/Propane</i>							
Single Family	6.0						
Detached	5.9	554	200	2.8	16,343,000	44,775	213,216
Attached							
Mobile Home: self pick-up	1.9	423	self pick-up				52,427
Mobile Home: w delivery	1.9	423	200	2.1	4,018,500	11,010	52,427
Multi-family (d)							
2-4 Units	0.2	186	125	1.5	99,200	272	2,427
5 or More Units							
Subtotal, If mobiles pick-up	8.0					45,047	215,643
Subtotal, If mobiles receive						56,057	268,069
Subtotal, If half mobiles rec						50,552	

Appendix Table B4: RESIDENTIAL HEATING SURVEY (Continued)

<i>Fuel Consumed</i> Housing Characteristic	Households (millions)	Annual Gallons	Delivery Size (a) (gallons)	Annual Deliveries /Household	Total Annual Deliveries	Total Daily Deliveries	Total Daily Barrels
<i>Kerosene</i>							
Single Family	2.6						
Detached	2.5	75	200	0.4	937,500	2,568	12,231
Attached							
Mobile Home: self pick-up	0.7	194	self pick-up				8,858
Mobile Home: w delivery	0.7	194	75	2.6	1,810,667	4,961	8,858
Multi-family	0.3						
2-4 Units	0.2	42	42	1.0	66,667	183	548
5 or More Units							
Subtotal, If MHs pick-up	3.4					2,751	12,779
Subtotal, If MHs receive						7,712	21,637
Subtotal, If half MHs receive						5,232	
TOTAL, Oil + LPG						139,972	771,787

- (a) Estimates by DHM-60, and represents delivery size "per household". Deliveries per building: divide total household deliveries by the number of households per tank (i.e., sharing one tank).
- (b) Assumes average of 3 households/ building or 300,000 buildings; each building with a 500 gallon tank. Also assumes each tank is filled each time with 3/4 its capacity (1/4 still in tank); Households x gallons = total gallons; total gal/ full tank size 3/4 = total annual deliveries.
- (c) Assumes 20 households per building; or 80,000 buildings; 3,000 gal. tank
- (d) Assumes average of 3 households/ building or 66,700 buildings; each building with a 500 gallon tank. Assumes delivery amount is 375 gallons/tank or 125 gallons per household per delivery.

NOTE: Gaps in data generally indicate insufficient observations in EIA survey.

SOURCE DATA: EIA, "Residential Energy Consumption Survey, " based on 1993 Data.

Appendix Table B5: LIQUID PETROLEUM GAS (LPG/PROPANE) USAGE, 1995

Industry /Sector	Percent Of Total Use
Petrochemical Industry	43%
Residential/Commercial	33%
Industry (general)	12%
Farm	8%
Internal Combustion	3%
Other	1%
TOTAL	100%

Source: American Petroleum Institute, "Propane, by Class of Trade."

NOTE: These percentages were applied to 1996 EIA supply figures to obtain propane use estimates in Appendix Table B2.

Appendix Table B6: PETROLEUM DISTILLATE USAGE, 1996

Sector	Annual Gallons (billions)	Annual Barrels (millions)	Daily Barrels (thousands)	Percent Of Total
On-Highway	27.0	643	1,761	51%
Residential	6.9	164	450	13%
Commercial	3.6	86	235	7%
Farm	3.6	86	235	7%
Railroad Industry	3.4	81	222	6%
Marine	2.5	60	163	5%
Industrial	2.3	55	150	4%
Off-Highway	2.2	52	144	4%
Oil Company	0.7	17	46	1%
Utilities	0.7	17	46	1%
Other	0.5	12	33	1%
TOTAL	53.4	1,271	3,483	100%

Source: U.S. Department of Energy, EIA.

NOTE: Daily figures used for selected product information in Table B2.